

AMENDMENTS TO THE CLAIMS

Please replace the claims with the following amendments:

1-54. (Cancelled).

55. A robust watermelon variety producing fruit with altered sugar ratios selected from at least one of elevated fructose and elevated sucrose content, having equal or reduced total sugar content, being devoid of bitterness and having superior sweet taste characteristics compared to currently available varieties, suitable for commercial scale cultivation.

56. The watermelon variety of claim 55, wherein the average fructose content is at least 50% or at least 55% of the total soluble sugar.

57. The watermelon variety of claim 55, wherein the average fructose content is at least 60% or at least 65% of the total soluble sugar.

58. The watermelon variety of claim 55, wherein the average sucrose content is at least 70% or at least 75% of the total soluble sugar.

59. The watermelon variety of claim 55, wherein the average combined content of fructose and sucrose is at least 90% or at least 95% of the total soluble sugar.

60. The variety of claim 55, wherein the variety is an inbred parent line.

61. The variety of claim 55, wherein the variety is a hybrid.

62. A watermelon fruit produced from the watermelon variety of claim 55.

63. A seed of a robust watermelon variety, wherein a plant grown from the seed is a watermelon variety of claim 55.

64. A watermelon plant, or part thereof, produced by growing the seed of claim 63.

65. The watermelon plant, or part thereof of claim 64, wherein the part thereof is a pollen grain, an ovule, or tissue culture of regenerable cells of the plant.

66. The plant or part thereof of claim 64, further comprising at least one additional trait selected from the group consisting of herbicide resistance, insect resistance, resistance to bacterial, fungal or viral disease, male sterility and improved nutritional value.

67. The plant or part thereof of claim 66, further comprising at least one additional trait selected from at least one type of disease resistance and at least one type of stress resistance.

68. The plant or part thereof of claim 66, wherein the additional trait is introduced by breeding, single trait conversion, or transformation.

69. The plant, or part thereof, of claim 64, wherein the plant or part thereof is transgenic and contains one or more transgenes operably linked to one or more regulatory elements.

70. The tissue culture according to claim 65, comprising cells or protoplasts from a tissue selected from the group consisting of leaves, pollen, ovules embryos, roots, root tips, anthers, flowers, fruit and seeds.

71. The tissue culture of regenerable cells of claim 70, wherein the tissue regenerates plants producing fruit with altered sugar ratios selected from at least one of elevated fructose and elevated sucrose content, having equal or reduced total sugar content, being devoid of bitterness and having superior sweet taste characteristics compared to currently available varieties, suitable for commercial scale cultivation.

72. A watermelon plant regenerated from the tissue culture of claim 71.

73. A method for breeding a watermelon plant producing fruit with altered sugar ratios selected from at least one of elevated fructose and elevated sucrose content, having equal or reduced total sugar content, being devoid of bitterness and having superior sweet taste characteristics compared to currently available varieties and suitable for commercial scale cultivation, comprising the steps of:

- a. crossing at least one wild type *Citrulus* species with a *Citrulus lanatus* to produce F₁ hybrid seeds;
- b. collecting the hybrid F₁ seeds;

- c. growing plants from the F₁ seeds;
- d. pollinating the F₁ plants;
- e. collecting the hybrid seeds produced by the F₁ plants;
- f. growing plants from the seeds produced by the F₁ plants;
- g. measuring the total soluble sugar content of ripe fruit produced from the plants grown from the seeds of the F₁ plants; and
- h. selecting plants with watermelon fruit comprising an average fructose content of at least 50%; sucrose content of at least 65%; or fructose and sucrose content of at least 90% of the total soluble sugar being devoid of the bitterness of the wild type *Citrulus* species.

74. The method of claim 73, wherein the pollination in step (d) includes self pollination or back crossing with a *C. lanatus* plant.

75. The method of claim 73, wherein the steps of crossing and selecting are repeated at least once.

76. The method of claim 73, further comprising the step of selfing, at least once, the selected plants, and further selecting plants producing fruit comprising an average fructose content of at least 50%; or sucrose content of at least 65%; or fructose and sucrose content of at least 90% of the total soluble sugar being devoid of the bitterness of the wild type *Citrulus*, to obtain super sweet watermelon advanced lines.

77. The method of claim 76, further comprising the steps of:

- a. crossing a *Citrulus* advanced line plant with a *C. lanatus* plant;
- b. selecting plants with watermelon fruits comprising an average fructose content of at least 50%; or sucrose content of at least 65%; or fructose and sucrose content of at least 90% of the total soluble sugar; and
- c. selfing the selected plants at least once to obtain inbred line producing fruit with altered sugar ratios selected from at least one of elevated fructose and elevated sucrose content, having equal or reduced total sugar content, being

devoid of bitterness and having superior sweet taste characteristics compared to currently available varieties and suitable for commercial scale cultivation.

78. The method of claim 77, wherein selfing is repeated 1 to 12 times.

79. A method of producing first generation hybrid seeds comprising crossing a first parent watermelon plant with a second parent watermelon plant and harvesting the resultant hybrid F₁ seeds, wherein the first and the second parent plants are inbred lines producing fruits with altered sugar ratios selected from at least one of elevated fructose and elevated sucrose content, having equal or reduced total sugar content, being devoid of bitterness and having superior sweet taste characteristics compared to currently available varieties, suitable for commercial scale cultivation.

80. A hybrid watermelon seed produced by the method of claim 79.

81. A hybrid watermelon plant, or parts thereof, produced by growing the seed of claim 80.

82. A method for producing a watermelon plant derived from the watermelon plant of claim 64, comprising:

- a. crossing a first watermelon plant line with a second watermelon plant to obtain F₁ progeny seed, wherein the first watermelon plant is a plant according to claim 64;
- b. growing the F₁ progeny seed under suitable plant growth conditions to yield an F₁ watermelon plant of the first hybrid plant; optionally;
- c. crossing the plant obtained in step (b) with itself or with a third watermelon plant to yield second progeny seeds derived from said first hybrid plant; and
- d. growing the second progeny seed under suitable plant growth conditions to yield additional watermelon plant derived of said first hybrid plant.

83. The method of claim 82, further comprising the step of repeating the steps of crossing the plant obtained in step (b) and growing the progeny seed at least 1 to 7 times to generate further watermelon plants.